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Alberta. Fish + Wildlife Division. Annual Report

annual report April 1, 1973 March 31, 1974

FISH AND WILDLIFE DIVISION

Alberta
LANDS AND FORESTS

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REPORT OF THE DIRECTOR

G. R. KERR

This fiscal year marked an increasing effort toward wildlife and fish habitat management through increased staffing of the habitat protection and land use planning programs. The "Buck for Wildlife" Program announced by the Minister in February of 1972 became reality. This program, designed to maintain, enhance, and create habitat for all forms of wildlife throughout the Province, received funding by special warrant for its first year of operations. Resource Development Stamps purchased by all licenced hunters and fishermen along with donations will be its future primary funding source.

The Sam Livingston Fish Hatchery and Rearing Station located in Calgary experienced its first operational year. Although problems were encountered in this initial year, they were overcome, allowing the program to proceed toward maximum production over the next few years.

The program of Fur Industry Development and Problem Wildlife Management were basically staffed and initiated while staff and improved equipment capability, such as night aircraft patrols, were provided to the Field Service and Enforcement operations.

The Division looks forward to future increased public benefits from the above new programs.

ADMINISTRATIVE BRANCH

TABLE 1
GAME
COMPARISON OF THE NUMBER OF WILDLIFE CERTIFICATES & GAME LICENCES ISSUED

	1970-71	1971-72	1972-73	1973-74
Resource Development Stamps				132,421
Wildlife Certificates	128,708	132,451	131,837	132,476
Bird Game Licences				
Resident	78,325	79,653	77,296	75,588
Non-Resident (Canadian)	4,681	4,881	5,106	5,728
Non-Resident (Alien)	1,056	994	1,096	1,093
Pheasant Shooting Ground Licences	—	—	—	6
Big Game Licences				
Resident Black Bear	1,015	2,805	3,274	4,016
Resident Caribou	461	276	434	374
Resident Elk	25,192	25,565	17,814	18,581
Resident 416-418 Elk (Ya Ha Tinda)	419	—	281	288
Resident Goat	—	—	75	52
Resident Grizzly Bear	201	162	219	201
Resident Moose	43,337	43,911	40,554	42,102

	1970/71	1971/72	1972/73	1973/74
Resident Moose, Elk or Deer (M.E.D.)	3,804	3,790	—	—
Resident Moose - Zone One	6,241	7,336	—	8,543
Resident Mule Deer	29,317	28,631	32,266	33,165
Resident Sheep	989	1,073	1,008	1,230
Resident Whitetail Deer	37,146	38,298	41,891	42,399
Resident Cougar	—	7	15	52
Resident Antelope	798	1,001	1,102	1,080
Resident Wainwright Deer	420	427	494	519
Resident Non-Trophy Sheep	314	310	329	299
Non-Resident & Non-Resident Alien Black Bear	130	317	366	434
Non-Resident & Non-Resident Alien Caribou	46	26	37	40
Non-Resident & Non-Resident Alien Cougar	—	—	3	3
Non-Resident & Non-Resident Alien Elk	346	292	353	320
Non-Resident & Non-Resident Alien Grizzly Bear	10	6	9	7
Non-Resident & Non-Resident Alien Male Moose	277	277	4,107	410
Non-Resident & Non-Resident Alien Moose - Zone One	3,747	4,385	—	3,304
Non-Resident & Non-Resident Alien Mule Deer	83	120	155	206
Non-Resident & Non-Resident Alien Sheep	216	199	123	107
Non-Resident & Non-Resident Alien Whitetail Deer	21	25	37	44
Restricted Big Game Licences	—	—	—	3
Non-Resident (Canadian) Special Big Game Licences	3	9	5	26
Duplicate	364	553	596	726

TABLE 2

FISH

COMPARISON OF THE NUMBER OF ANGLING & FISH LICENCES ISSUED

	1970/71	1971/72	1972/73	1973/74
Resident & Non-Resident Canadian	145,491	156,575	171,863	180,847
Seasonal Non-Resident Non-Canadian	723	727	911	1,009
Limited Non-Resident Non-Canadian	2,123	2,182	2,479	2,889
Zone Commercial Licences	467	383	342	339
Zone Fisherman's Licences	1,396	1,261	1,201	1,149
Domestic Indian/Metis Licences	91	101	100	136
Zone Recreational Licences	62	9	58	112
Spear Fishing Licences	328	417	438	504
Sturgeon Fishing Licences	40	24	24	31
Trophy Lake Fishing Licences	281	404	806	1,017
Fish Marketing Licences - Class "A"				1
	14	13	12	
Fish Marketing Licences - Class "D"				11
Commercial Game Fish Farm Licences				
Initial				10
	16	28	23	
Renewal				14
Private Game Fish Farm Licences				
Initial				388
	173	354	465	
Renewal				299
Restricted Game Fish Farm Licences	—	—	—	6

TABLE 3
REVENUES FROM WILDLIFE CERTIFICATES
GAME & FISH LICENCES
1973-74 SEASON

	Number	Fee	Total Amount
Resource Development Stamps	132,421	1.00	$132,421.00
Wildlife Certificates	132,476	3.00	397,428.00
Resident Bird Game Licences	75,588	2.50	188,970.00
Non-Resident (Canadian)	5,728	5.00	28,640.00
Non-Resident (Alien)	1,093	50.00	54,650.00
Resident Black Bear	4,016	5.00	20,080.00
Resident Caribou	374	10.00	3,740.00
Resident Elk	18,581	5.00	92,905.00
Resident 416-418 Elk (Ya Ha Tinda)	288	5.00	1,440.00
Resident Goat	52	10.00	520.00
Resident Grizzly Bear	201	10.00	2,010.00
Resident Moose	42,102	5.00	210,510.00
Resident Mule Deer	33,165	5.00	165,825.00
Resident Sheep	1,230	10.00	12,300.00
Resident Whitetail Deer	42,399	3.00	127,197.00
Resident Cougar	52	10.00	520.00
Resident Antelope	1,080	10.00	10,800.00
Resident Wainwright Deer	519	5.00	2,595.00
Resident Non-Trophy Sheep	299	5.00	1,495.00
Non-Res. & Non-Res. Alien Black Bear	434	3.00	1,302.00
Non-Res. & Non-Res. Alien Caribou	40	100.00	4,000.00
Non-Res. & Non-Res. Alien Cougar	3	75.00	225.00
Non-Res. & Non-Res. Alien Elk	320	100.00	32,000.00
Non-Res. & Non-Res. Alien Grizzly Bear	7	200.00	1,400.00
Non-Res. & Non-Res. Alien Male Moose	410	150.00	61,500.00
Non-Res. & Non Res. Alien Moose - Zone One	3,304	100.00	330,400.00
Non-Res. & Non Res. Alien Mule Deer	206	50.00	10,300.00
Non-Res. & Non-Res. Alien Sheep	107	200.00	21,400.00
Non-Res. & Non-Res. Alien Whitetail Deer	44	50.00	2,200.00
Special Guiding Authorities	26	75.00	1,950.00
Duplicate Licences	726	2.00	1,452.00
Archery Licences	579	3.00	1,737.00
Guides Licences (Class A)	293	50.00	14,650.00
Guides Licences (Class B)	682	25.00	17,050.00
Game Bird Farm Licences (Class A)	29	25.00	725.00
Game Bird Farm Licences (Class B)	38	10.00	380.00
Game Bird Farm Licences (Class C)	15	5.00	75.00
Resident Trappers Licences	5,562	3.00	16,686.00
Outfitters Licences	53	100.00	5,300.00
Taxidermist Licences	128	5.00	640.00
Dog Trainers Licences Res.	2	5.00	10.00
Dog Trainers Licences Non-Res.	9	25.00	225.00
Game Farm Licences (Big Game)	5	100.00	500.00

	Number	Fee	Total Amount
Photographic Big Game Farm Licences	3	100.00	300.00
Assistant Dog Trainer's Non-Res.	22	5.00	110.00
Resident & Non-Resident Canadian Angling	180,847	4.00	723,388.00
Seasonal Non-Resident Non-Canadian Angling	1,009	10.00	10,090.00
Limited Non-Resident Non-Canadian Angling	2,889	3.00	8,667.00
Zone Commercial Licences	339	50.00	16,950.00
Zone Fisherman's Licences	1,149	15.00	17,235.00
Domestic Indian/Metis Licences	136	free	
Zone Recreational Licences	112	5.00	560.00
Spear Fishing Licences	504	3.00	1,512.00
Sturgeon Fishing Licences	31	5.00	155.00
Trophy Lake Fishing Licences	1,017	5.00	5,085.00
Fish Marketing Licences - Class "A"	1	100.00	100.00
Fish Marketing Licences - Class "D"	11	10.00	110.00
Commercial Game Fish Licences - Initial	10	50.00	500.00
Commercial Game Fish Licences - Renewal	14	15.00	210.00
Private Game Fish Farm Licences - Initial	388	10.00	3,880.00
Private Game Fish Farm Licences - Renewal	299	5.00	1,495.00
Restricted Game Fish Farm Licences	6	5.00	30.00

TABLE 4
FUR DEALERS LICENCES, ETC, (1973/74)

Kind	Number	Amount
Resident Fur Dealer Licences	117	$ 1,170.00
Non-Resident Fur Dealers Licences	1	100.00
Resident Travelling Fur Purchasing Agents Licences	33	3,300.00
Furriers Licences	10	100.00
Tanners Licences	9	90.00

TABLE 5
COMPARISON FIGURES OF THE SALE OF FURS FUR TAX REVENUES, AND FUR PRODUCTION

	1970/71	1971/72	1972/73	1973/74
SALE OF FURS				
Amount realized from the sale of confiscated furs & Problem Wildlife	$444.63	$881.25	$3,848.22	$11,563.77
Number of Registered Traplines	2,019	2,005	1,980	1,982
Number of Trapline Renewals & Partnerships 1973/74 season	2,645	@ $10.00	—	$26,450.00
FUR TAX REVENUES				
Amount Collected	$74,259.40	$90,998.21	$108,756.32	$77,145.04
FUR PRODUCTION				
Number of Pelts	526,017	567,033	620,357	413,355
Value of Pelts	$1,463,547.54	$2,765,084.63	$5,746,485.91	$4,310,328.22

Figure 1

VALUE OF WILD FUR IN ALBERTA 1968-1973

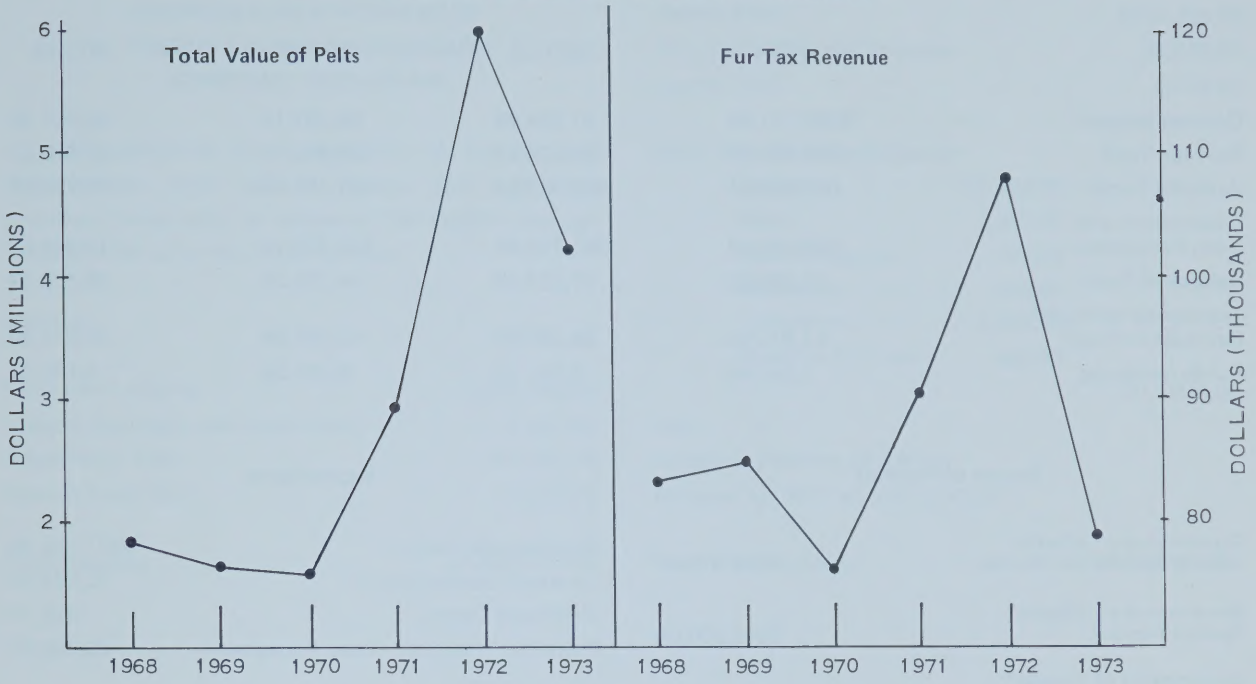


TABLE 6

ALBERTA FUR PRODUCTION SEASON 1973-74

(WILD FUR)

	Total Number of Pelts	Average Value of Pelts	Total value of Pelts
Badger	1931	$23.46	$45,301.26
Bear	688	53.34	36,697.92
Beaver	61982	18.35	1,137,369.70
Bobcat	55	61.83	3,400.65
Coyotes	44784	35.55	1,592,071.20
Ermine	15724	1.50	23,586.00
Fisher	2266	40.96	92,815.36
Fox, Blue	14	28.50	399.00
Fox, Cross	443	70.48	31,222.64
Fox, Red	1596	38.71	61,781.16
Fox, Silver	150	39.52	5,928.00
Fox, White	136	43.16	5,869.76
Lynx	6540	85.16	556,946.40
Marten	1518	15.92	24,166.56
Mink	4993	19.73	98,511.89
Muskrat	211522	2.24	473,809.28
Otter	140	43.57	6,099.80
Rabbits, Jack	4654	.68	3,166.08
Raccoon	25	18.00	450.00
Skunk	32	1.15	36.80
Squirrel	53336	.97	51,735.92
Wolf, Timber	671	70.04	46,996.84
Wolverine	155	77.20	11,966.00

TABLE 7
WILDLIFE DAMAGE FUND

	1970-71	1971-72	1972-73	1973-74
Opening Balance	$289,271.84	$1,294.48	$8,561.16	$8,081.36
Revenue Total	398,326.60	398,338.02	595,840.27	1,051,690.23
Available Funds	687,598.44	399,632.50	604,401.43	1,059,771.59
Expenditure and Loan Repayment	645,199.42	351,710.44	550,372.11	1,013,944.62
Balance of Fund	42,399.02	47,922.06	54,029.32	45,826.97
Transferred to Wildlife Depredation Trust	41,104.54	39,360.90	45,947.96	39,651.90
Funds remaining	1,294.48	8,561.16	8,081.36	6,175.07

Source of Revenue		Expenditures	
Government of Alberta Sale of Wildlife Certificates	$396,519.00	Crop Damage Claims	$977,145.00
		Livestock Compensation	10,874.52
Government of Alberta Special Warrant	$655,000.00	Veterinary Claims	925.10
		Provincial Treasurerr - Loan Repayment	25,000.00
Government of Canada*	–		
Miscellaneous and Interest	$171.23		
Total	$1,051,690.23	**Total**	$1,013,944.62

*No funds during this fiscal year

TABLE 8
COMPARISON OF CROP DAMAGE CLAIMS
LIVESTOCK COMPENSATION & VETERINARY CLAIMS

CROP DAMAGE CLAIMS	1970/71	1971/72	1972/73	1973/74
Claims	1,431	906	997	1,387
Acreage Damage	52,662	52,441	74,560	98,837
Settlement & Costs	$589,346.52	$315,559.62	$516,101.38	$977,145.00
LIVESTOCK COMPENSATION				
Claims	45	43	38	38
Cost	$8,924.88	$8,703.12	$9,710.25	$10,874.52
VETERINARY CLAIMS				
Claims	26	28	21	40
Cost	$653.30	$603.30	$538.80	$925.10

TABLE 9
ALBERTA HAIL & CROP INSURANCE CORPORATION STATEMENT OF RECEIPTS AND DISBURSEMENTS COVERING 1973 CLAIMS

The following is a statement of receipts and disbursements made by the Alberta Hail and Crop Insurance Corporation in respect of the Wildlife Damage Fund of Alberta for the 1973 crop year:

Receipts	
Province of Alberta	$977,145.00
Interest from Bank and Investments	4,227.85
Registration Fees	42,463.75
Balance from 1972	4,428.95
Total Receipts	$1,028,265.55

Disbursements		
Awards Paid		$935,356.76
Adjusters' Wages and Expenses		26,046.04
Agents' Fees		4,332.00
Other Administrative Expenses:		
Salaries	$7,200.00	
Rent	1,350.00	
Data Processing	400.00	
Stationery	450.00	
Telephone	1,200.00	
Board of Directors	400.00	
		$11,000.00
Plus:		
Cheque to Province of Alberta (to close out 1973 a/c)r		$51,530.75
Total Disbursements		$1,028,265.55

TABLE 10
WILDLIFE DEPREDATION (LURE CROP PROGRAM) TRUST ACCOUNT (6243A)

	Jan. 1, 1971 March 31, 1971	April I, 1971 March 31, 1972	April 1, 1972 March 31, 1973	April 1, 1973 March 31, 1974
Opening Balance	—	$33,660.98	$32,682.02	$48,147.69
Receipts				
County of Grande Prairie	—	5,184.00	—	—
Ducks Unlimited	—	4,000.00	4,000.00	—
Government of Canada	$ 4,000.00	4,000.00	13,447.14	—
Wildlife Damage Fund	41,104.54	39,360.90	45,947.96	39,651.90
Interest & Misc.	—	408.00	1,192.99	919.53
	45,104.54	86,613.88	97,270.11	88,719.12
Expenditure	11,443.56	53,931.86	49,122.42	40,222.48
Closing Balance	33,660.98	32,682.02	48,147.69	48,496.64

TABLE 11

TOTAL REVENUES AND EXPENDITURES

	FISH LICENCES		GAME LICENCES				
	Number Sold	Revenue	Number Sold	Revenue	Miscellaneous Revenue	Total Revenue	Total Expenditure
1957/58	118,323	$147,434.70	120,968	$457,969.92	110,091.04	715,495.66	522,483.82
58/59	129,167	156,487.20	148,057	523,435.05	101,335.20	781,257.45	568,302.88
59/60	135,243	162,681.70	140,914	516,806.78	116,848.32	796,336.80	687,531.01
60/61	146,645	167,932.05	172,631	631,920.81	132,020.25	931,873.11	806,236.43
61/62	125,280	247,821.45	155,174	585,801.15	117,564.12	951,186.72	808,278.26**
62/63	126,764	247,096.90	166,036	648,603.60	115,794.37	1,011,494.87	879,594.41**
63/64	134,462	262,348.60	181,521	658,141.09	110,841.92	1,031,331.61	912,420.21**
64/65	129,073	248,709.65	184,076	674,002.14	118,376.01	1,041,087.80	1,016,510.31**
65/66	127,194	246,739.95	189,320	685,188.68	103,392.52	1,035,321.15	1,117,719.07**
66/67	137,687	265,139.50	190,824	733,964.25	92,030.68	1,091,134.43	1,330,052.83**
67/68	141,676	273,456.60	218,865	1,042,831.40	99,781.37	1,416,069.37	1,556,926.07**
68/69	143,062	433,982.90	241,879	1,164,015.41	109,576.00	1,707,574.31	1,646,200.51**
69/70	155,444	464,622.30	245,804	1,122,907.97	92,813.10	1,680,343.37	1,889,176.34**
70/71	151,205	457,379.60	246,030	1,288,816.40	111,640.14*	1,857,836.14	2,000,895.56**
71/72	162,480	488,041.80	253,773	1,360,857.18	97,270.05*	1,946,169.03	2,379,489.93**
72/73	178,222	526,769.70	239,062	1,419,902.82	130,626.77*	2,077,299.29	2,426,889.23**
73/74	188,033	720,259.70	373,413	1,577,498.92	106,253.14*	2,404,011.76	4,259,889.74**

TABLE 12

MISCELLANEOUS REVENUE

Year	Fisheries Miscellaneous	Fisheries Royalty	Fur Tax	Other Miscellaneous	Total
1953/54	$128.72	$23,860.61	$90,982.58	$1,160.29	$116,132.20
54/55	415.31	27,181.00	92,150.68	562.86	120,309.85
55/56	782.59	23,341.48	124,907.31	2,157.23	151,188.61
56/57	423.30	25,462.86	81,796.11	1,032.10	108,714.37
57/58	1,034.21	22,898.15	84,973.05	1,185.63	110,091.04
58/59	1,719.03	24,757.58	72,412.38	2,446.21	101,335.20
59/60	2,087.16	34,286.42	78,307.77	2,166.97	116,848.32
60/61	4,337.94	46,890.16	78,437.40	2,354.75	132,020.25
61/62	809.59	23,836.75	84,449.87	3,467.91	112,564.12
62/63	4,125.74	15,496.11	90,822.07	5,350.45	115,794.37
63/64	3,338.97	14,794.42	87,731.71	4,976.82	110,841.92
64/65	259.77	9,054.69	104,299.36	4,762.19	118,376.01
65/66	888.10	14,165.32	85,208.64	3,130.46	103,392.52
66/67	409.92	14,232.36	72,730.28	3,658.12	92,030.68
67/68	224.78	14,439.74	78,798.35	6,318.50	99,781.37
68/69	1,700.68	13,698.29	90,264.30	3,912.73	109,576.00
69/70	810.97	12,533.15	76,872.32	2,596.66	92,813.10
70/71	533.21	22,352.79	86,350.53	2,403.61	111,640.14
71/72	1,049.48	12,194.18	79,549.08	4,477.31	97,270.05
72/73	878.52	15,095.62	109,080.89	5,571.74	130,626.77
73/74	889.32	13,350.35	77,145.04	14,868.43	106,253.14

*See Miscellaneous Revenue Page

**1961/62 - 1973/74 includes Cost Sharing Programs and Predator control

WILDLIFE

During 1973 the Wildlife Branch continued to concentrate on wildlife habitat protection and development under the Buck for Wildlife program, and problem wildlife management. Status reports on major provincial species were completed by the regional biologists. Management Section acquired a waterfowl biologist to complement the waterfowl damage prevention program and a wildlife biologist for the problem wildlife team. Two important bird programs were initiated this year - the introduction of Merriam's turkey to the Porcupine Hills and experimental breeding of peregrine falcons for future wild release. A series of wildlife management articles was begun to help inform the public as to management policies adopted by the Branch. Major problems faced in 1973 included the decline of pheasant populations due to habitat loss and two consecutive years' low production, and the bear-bee conflict in which problem bears were removed and electric fences erected as a possible preventive measure. A list of major research, management and habitat projects carried out in 1973-74 follows:

RESEARCH AND MANAGEMENT PROJECTS

1. General
   (a) Utilization of control burns by wild ungulates.
   (b) Expansion of lure crop program in Peace River area.
   (c) Biological re-assessment of early North West Pulp and Power clearcuts.
   (d) Forensic study on bio-analysis of wild game.
2. Bear
   (a) Population dynamics of Cold Lake black bear.
   (b) Evaluation of beekeeper-black bear conflict: control and preventive effort using electric fences.
3. Bighorn Sheep
   (a) Population dynamics of Ram Mountain Sheep
   (b) Trapping and tagging of sheep on Red Cap range.
4. Deer
   (a) Survival and mortality of Camp Wainwright deer.
   (b) Population response of a hunted white-tail deer herd to a regime of no hunting at Rochester.
   (c) Effects of season manipulation on Pine Lake deer herd.
5. Elk
   (a) Evaluation of census techniques for elk populations.
   (b) Examination of elk depredation in Highwood area.
   (c) Evaluation of elk winter ranges.
6. Geese
   (a) Evaluation of goose nesting platforms
   (b) Canada goose brood studies on Dowling Lake
   (c) Banding and transplanting of Canada geese.
7. Moose
   (a) Effect of hunting on Swan Hills moose population.
   (b) Movement and distribution of moose relative to hunting and range quality.
8. Pronghorn Antelope
   (a) parasites
   (b) forage utilization
   (c) doe-kid behavior
   (d) chemical composition of silver sage.
   (e) serology survey
   (f) migration patterns
   (g) baseline blood physiology
9. Upland Birds
   (a) Evaluation of spring release of hen pheasants
   (b) Assessment of introduction of Merriam's turkey to Porcupine Hills.
10. Wildlife Rabies
   (a) Rabies control measures and status of skunks and bats as vectors.
11. Wolves
   (a) Evaluation of wolf damage control and extent of damage to livestock in Peace River region.

BUCK FOR WILDLIFE PROJECTS

1. Habitat Development Projects
   (a) Millicent - 18 miles of shelterbelts planted for pheasant habitat and development of irrigation system.
   (b) Bigelow Reservoir - aquatic vegetation planted, shelterbelts and crops planned for bird game.
   (c) Chin Project - shelterbelt site prepared for upland bird game.
   (d) Heninger Reservoir - shelterbelting for upland birds.
2. Habitat Improvement Projects
   (a) Beaverhill Lake - nesting islands constructed and shoreline protected for wildlife.
   (b) Buffalo Lake - hay and cereal crops planted as well as shelterbelts.
   (c) Spring Creek - study wildlife and livestock use of the area.
   (d) Sheep River - fertilization of area to improve quality of forage on bighorn winter range.
   (e) Moose Creek - 130 acres seeded to grass and willows planted to re-establish ungulate habitat.
   (f) Chip Lake Island - island margins cleared of shrubby vegetation to encourage waterfowl nesting.
   (g) Shiningbank moose range - old willow stands cleared to improve moose range.
   (h) Stirling Lake - water levels of lake being stabilized.
   (i) Cygnet Lake - lake levels being stabilized to encourage waterfowl production.
   (j) McVinnie property - upland bird habitat improved through shelterbelting and planting of suitable crops.
   (k) Elk winter range - aerial fertilization of 1000 acres of Highwood range to improve quality of forage.

Figure 1

Relative population levels during 10 year cycle of Hares, Grouse and predators showing current levels for 1973. (Courtesy of Dr. L.B. Keith, from studies at Rochester, Alta.) Insert shows harvest trends of Sharp-Tailed Grouse at Camp Wainwright, Alta.

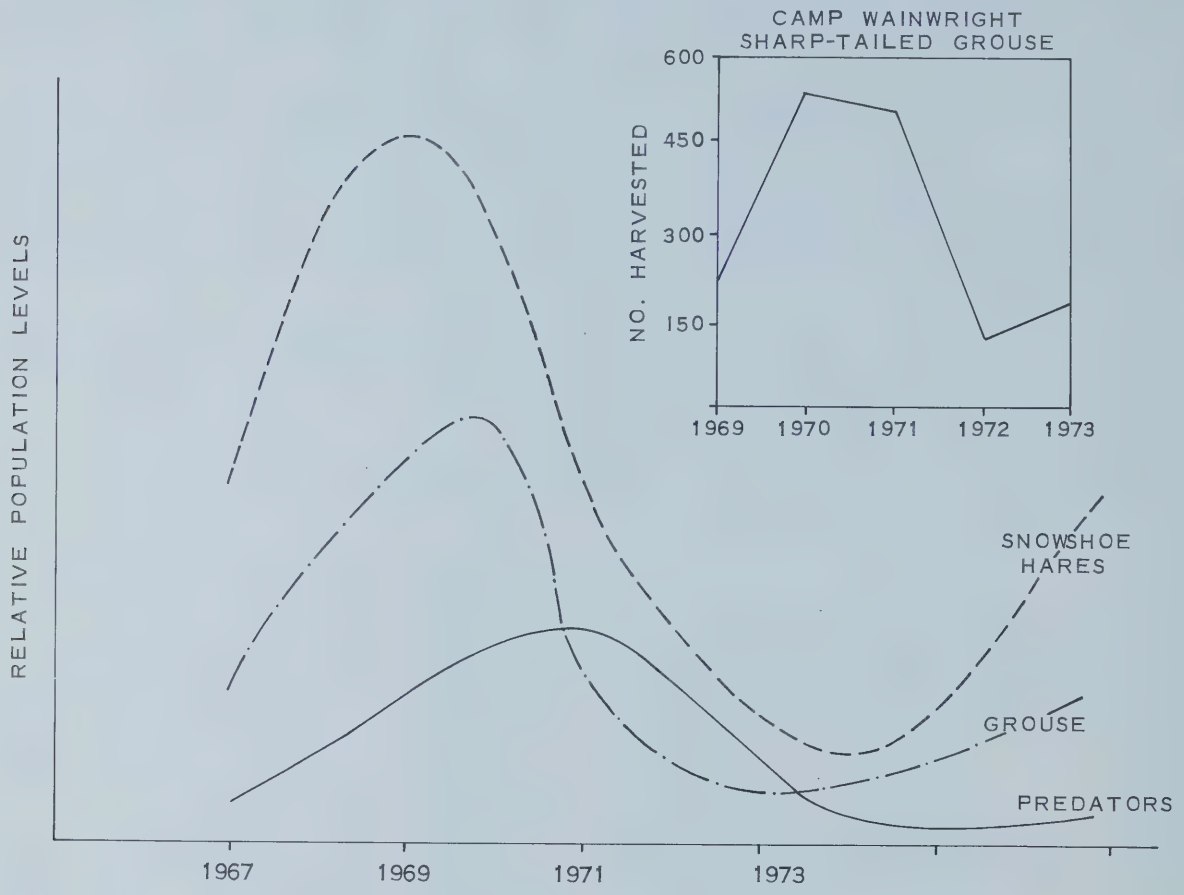
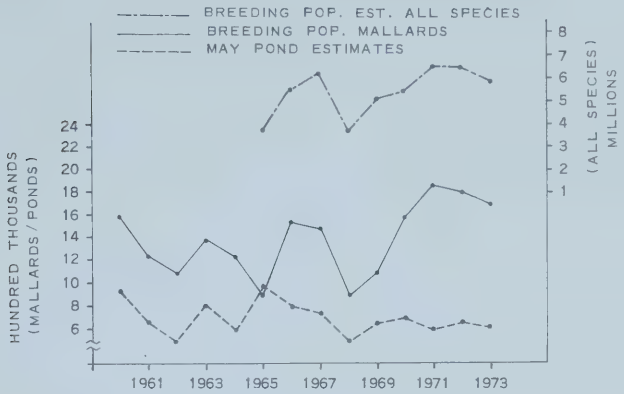


Figure 2

ALBERTA WATERFOWL BREEDING POPULATION



Long term trend of duck breeding population estimates and May pond estimates, from U.S.F. & W.S. Aerial Surveys in Alberta Strata 26, 27, 28 & 29.

Figure 3

ALBERTA WATERFOWL HARVEST & LICENSE SALES

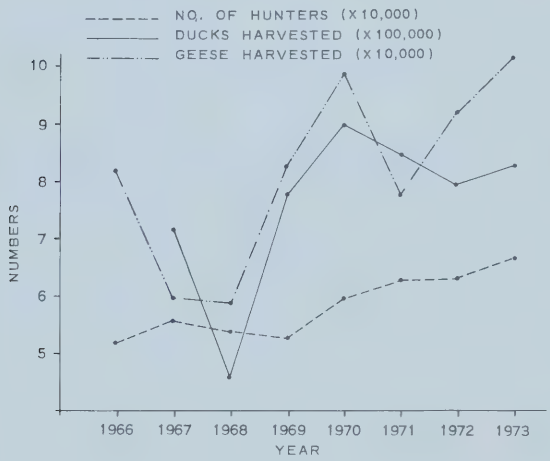


Figure 4

WATERFOWL DAMAGE TO ALBERTA CROPS

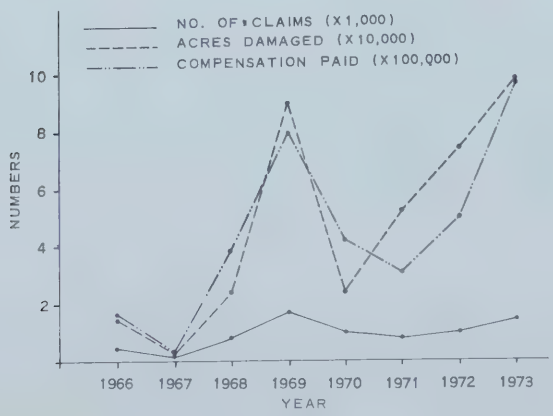


Figure 5

Deer densities in various areas of Alberta, indicating population trends over the past several years.

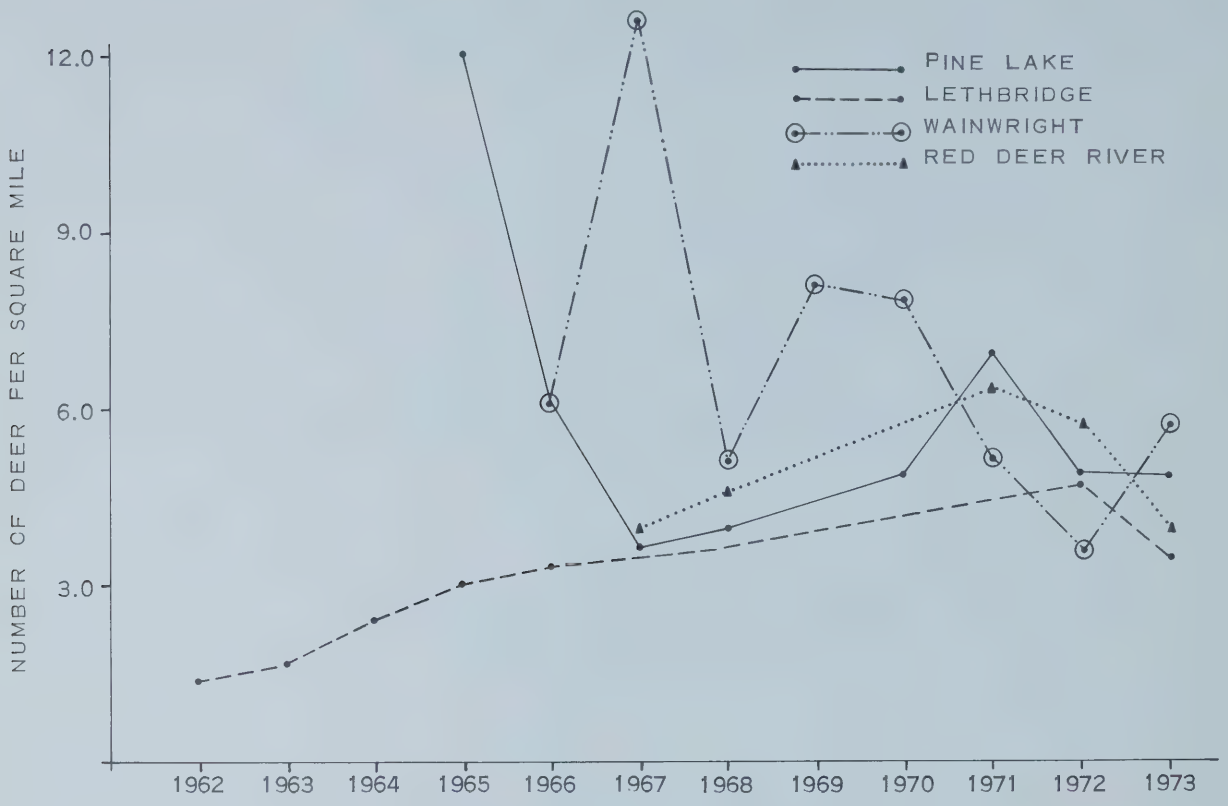


Figure 6

Moose densities recorded for Swan Hills and Red Deer areas, indicating population trends.

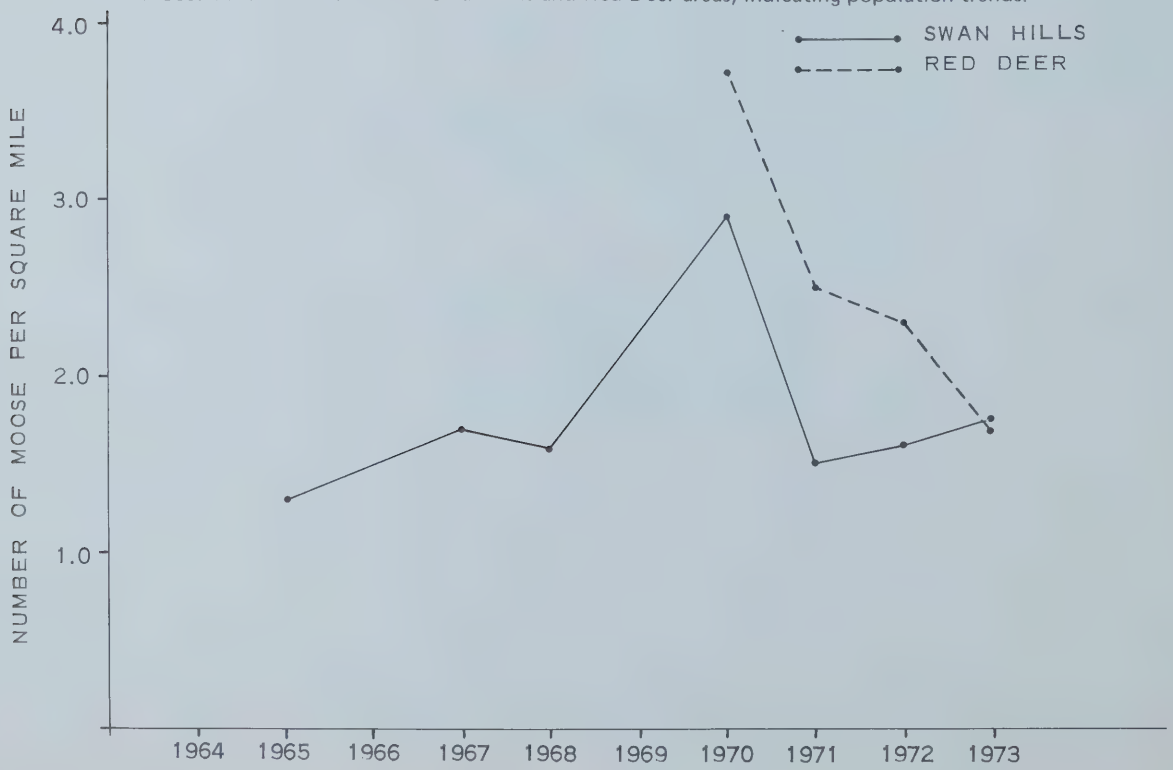


TABLE 1

BIG GAME HARVEST INFORMATION 1968 - 1973

Species	1968			1969			1970			1971			1972			1973		
	Res.	Non. Res.	Est. Pop.	Res.	Non. Res.	Est. Pop.	Res.	Non. Res.	Est. Pop.	Res.	Non. Res.	Est. Pop.	Res.	Non. Res.	Est. Pop.	Res.	Non. Res.	Est. Pop.
Antelope	955	N/E	10,000	No. Season		8,500	481	N/E	11,000	628	N/E	10,000	660	N/E	10,500	695	N/E	10,500
Bighorn (Trophy)	132	40		56	58		58	50		56	43	4,000	73	42	4,000	94	36	4,500
Sheep (Non-Trophy)	109	N/E		138	N/E		95	N/E		109	N/E		100	N/E		93	N/E	
Mountain Goat	40	45		22	32	4,000	No Season			No Season			22	N/E		14	N/E	1,000
Grizzly (Spring)	12			12						4			14	1		16	1	1,000
Bear (Fall)	49			19			No Season			No Season			No Season				No Season	1,500
Black Bear	332*			274*						N/A			N/A				N/A	Unknown very high
Moose	14,635	2,683		17,713	2,448		N/A			N/A			N/A			N/A		
Elk	4,395	523		3,623	211		N/A			N/A			2,156*		19,000*		2,014*	20,000
Caribou		N/A			N/A		N/A			23	3		30	16		19	5	4,000 - 5,000
Deer	24,649	262			22,341	79	21,000			23,500					26,000	11,370		N/A
Cougar		N/A			N/A		N/A			13				7	4	21	3	1,000 - 1,500

N/E - non-residents not eligible to hunt

N/A - information not available

* - by questionnaire

† - preliminary questionnaire results

FISHERIES

There was a continuation of the increasing trend in demand for recreational fishing and private game fish farming during 1973. Commercial fishing showed a decline in both activity and production and Commercial Game Fish Farming remained static. In response to the increasing demand on the fisheries resources, the Fisheries Branch established a regional biologist in Edmonton to be responsible for fisheries management in the heavy demand area adjacent to the city.

THE RECREATIONAL FISHERY

Licence Sales

A comparison of annual angling licence sales gives a crude measure of the demand for recreational fishing. Table 1 shows a comparison of recreational fisheries license sales for the period from 1969 to 1973. An increase of 9,617 licences were sold, or 5.47 percent occurred in 1973 over 1972. This increase was considerably less than the increase of 9.9 percent experienced in 1972 over 1971. The greatest increase was in Resident and Non-Resident Canadian angling licences; however, increased sales were evident in all types of licences.

TABLE 1
RECREATIONAL FISHERIES LICENCE SALES

TYPE OF LICENCE	1969-70	1970-71	1971-72	1972-73	1973-74
Resident & Non-Resident Canadian	150,225	145,491	156,575	171,863	180,847
Seasonal Non-Resident Non-Canadian	701	723	727	911	1,009
Limited Non-Resident Non-Canadian	2,052	2,123	2,182	2,479	2,889
Sub Total	152,978	148,337	159,484	175,253	184,745
Spear Fishing Licence	231	328	417	438	504
Sturgeon Angling Licence	56	40	24	24	31
Zone Recreational Net Fishing Licence	37	62	9	58	112
Trophy Lake Licence		281*	404*	806*	1,017*
Total	153,302	148,767	159,934	175,773	185,390

*Not included in total, as an anglers licence required before a Trophy Lake Licence can be purchased.

FISH CULTURE

In 1973, a total of 156 lakes were stocked with a total of 4,457,223 fish and fish eggs of various species. All the fish stocked were directed toward the recreational fishery and Table 2 shows the species and the numbers stocked in 1973.

TABLE 2

SPECIES COMPOSITION AND NUMBERS OF FISH

STOCKED IN 1973

Species	Number	Percent
Rainbow Trout	2,703,117	60.6
Eastern Brook Trout	3,500	0.1
Perch	50	0.1
Pike	556	0.1
Walleye (eyed eggs)	1,500,000	33.7
Walleye (fry)	250,000	5.6
	4,457,223	100.00

TABLE 3

TOTAL HATCHERY PRODUCTION OF FISH FOR THE PAST FIVE YEARS

1969	-3,639,995
1970	-4,149,386
1971	-4,739,217
1972	-3,945,279
1973	-2,773,640

THE COMMERCIAL FISHERY

A total of 107 lakes were available for commercial fishing in 1973. Of this total, 76 lakes were fished and produced 4,610,743 pounds of fish. Compared to 1972, the number of lakes shown as available on the fishing schedules was reduced from 115 to 107. The 8 lakes were not unavailable to fishermen, but were put in a category of being opened to fishing on request, so they did not show on the commercial fishing season schedules. Most of the 8 lakes were small with difficult access and have not been fished for several years, however; the fishermen requested they be kept available for fishing on a request basis.

Table 5 shows the number of commercial fishing licences sold during the years 1969 - 1973. A steady decline in the number of licences sold is evident.

TABLE 4

REGIONAL DISTRIBUTION OF STOCKED FISH

Table 4 shows the regional distribution of the stocked fish and the numbers of lakes in each region that were stocked.

Region	Number of Fish	Number of Lakes
Region 1 - Lethbridge	1,203,780	31
Region 2 - Calgary	855,237	25
Region 3 - Red Deer	1,423,475	54
Region 4 - Edson	913,164	25
Region 5 - St. Paul	105,817	12
Region 6 - Peace River	193,030	9

All the fish stocked are not the product of the fish hatchery, some being brought in from other provinces and some are transfers from one lake to another. Table 4 shows the annual production of fish from the fish hatchery. The sharp decrease in production in 1973 reflects the start up of the Sam Livingston Fish Hatchery and Rearing Station. This new fish hatchery did not commence operation until March of 1972, and this timing was too late to obtain fish eggs and establish a full level of production to cover both the 1972 and 1973 seasons. This reduced level of production is reflected in the lower number of lakes stocked in 1973 as compared to 1972 (156 compared to 184).

TABLE 5

COMMERCIAL FISHING LICENCES AND ASSOCIATED OPERATION LICENCE SALES

Type of Licence	'69-70	'70-71	'71-72	'72-73	'73-74
Zone Commercial	372	467	383	342	339
Zone Fishermen	1,594	1,396	1,261	1,201	1,149
Total	1,966	1,863	1,644	1,543	1,488
Domestic	104	91	101	100	136
Fish Marketing	7	14	13	12	12

TABLE 6
COMMERCIAL PRODUCTION OF FISH IN ALBERTA
(ROUND WEIGHT)

Species	1969-70	1970-71	1971-72	1972-73	1973-74
Whitefish	2,450,022	2,339,934	2,183,384	2,208,021	2,178,142
Trout (lake)	3,332	3,718	4,318	4,765	7,645
Walleye (Pickerel)	200,257	136,124	171,899	148,008	90,284
Perch	224,477	279,488	136,945	39,674	16,547
Pike	1,004,104	760,653	673,630	611,836	469,282
Tullibee	6,189,233	2,902,960	1,451,707	1,373,770	1,467,810
Ling	389,899	214,795	416,531	187,651	231,638
Suckers	344,171	257,465	308,203	283,983	149,395
Goldeye	276	420	630	563	
	10,805,771	6,895,597	5,347,247	4,858,281	4,610,743

Table 6 shows a comparison of the total catch for the years 1969 to 1973.

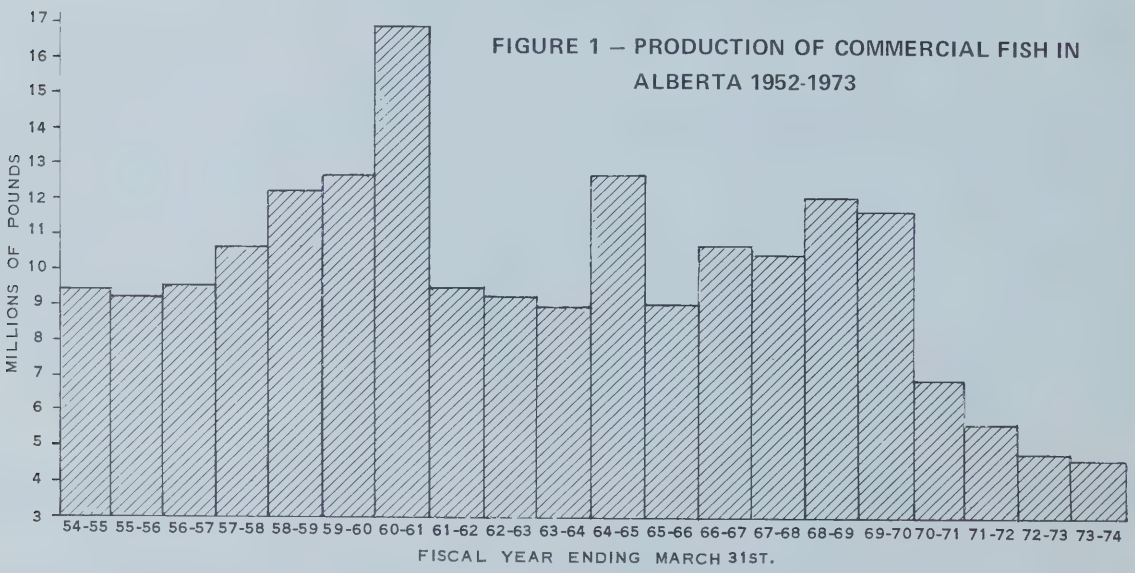


FIGURE 1 – PRODUCTION OF COMMERCIAL FISH IN ALBERTA 1952-1973

Figure 1 shows a comparison of commercial fish production in Alberta for the past 20 years.

TABLE 7
VALUE OF THE COMMERCIAL FISH PRODUCTION IN ALBERTA

	Weight	Value to Fishermen	Value as Marketed
1969-70	10,805,771	1,017,162.89	1,727,743.78
1970-71	6,895,597	826,268.91	1,587,718.45
1971-72	5,347,247	729,931.28	1,411,450.98
1972-73	4,858,281	727,082.70	1,476,091.09
1973-74	4,610,743	801,722.77	1,433,573.68

Table 7 shows the dollar value to the commercial fish catch to the fisherman and as a market product.

AQUACULTURE

There was a very sharp increase in interest in fish farming, particularly private fish farms for personal recreation and enjoyment. Table 8 shows the number of game fish farm licences sold during the five years from 1969 to 1973.

TABLE 8

GAME FISH FARM LICENCE SALES

Year	Private	Commercial
1969-70	58	7
1970-71	173	16
1971-72	354	28
1972-73	465	23
1973-74	687	24

Of the 687 private licences, 388 were initial licences and 299 were renewals. Of the 24 commercial licences, 10 were initial and 14 were renewals. Comparing the licence renewals with the previous years sales shows the rate of turnover of licences. In the case of private licences, the rate compared to the 1972-73 total was 35.6 percent and in the case of commercial licences, it was 39.1 percent.

A total of 330,000 trout were imported into Alberta by the commercial game fish farmers. The majority of these fish were distributed to the private fish farmers and only 4,300 fish were sold directly for human consumption.

FISHERIES MANAGEMENT

A new fisheries management region was established during 1973 encompassing the area of approximately 60 miles radius from the City of Edmonton. The regional fisheries biologist is located in Edmonton and is responsible for the management of both the sport and commercial fisheries in the area. Surveys carried out in 1968 and 1969 indicated that the area west of Edmonton for approximately 60 miles was the heaviest used area in the province for sport fishing.

Surveys to provide basic fisheries and aquatic ecological information in the areas north of Lesser Slave Lake, and in the northwest part of the province were completed during 1973.

HABITAT PROTECTION AND DEVELOPMENT

The Aquatic Habitat Protection section increased its involvement in reviews of guidelines for projects affecting waterbodies and made inputs towards formulation of guidelines. Some examples of these reviews include tar sands extraction applications, coal mining exploration and development applications and pipeline and road crossings on streams. The section endeavoured to make other agencies aware of the sensitivity of aquatic environments to disturbance and the need to adopt measures to minimize disturbance. A study was initiated into the problem of culverts and their effects on fish passage. A number of ecological impact studies were critically reviewed and appropriate comments were made.

The 1973-74 fiscal year was the first year in which resident anglers paid an additional dollar on their fishing licence for the development and improvement of sport fisheries habitat. A total of 180,847 resource development stamps were sold during 1973-74. This was the fisheries part of the Division's "Buck for Wildlife" program. A fishery biologist was acquired to supervise the program in the Fisheries Section. Fourteen projects as shown in Table 9, were approved in this first year and three were completed. A total of $5,500.00 was expended on these three projects.

TABLE 9

BUCK FOR WILDLIFE PROJECTS

(FISHERIES)

Projects Initiated	Region	Project Status
Stauffer Creek Improvement and Development	Red Deer	
Little Beaverdam Lake Improvement	Lethbridge	Completed
Heninger's Reservoir Improvement	Lethbridge	
Lehto Reservoir Improvement	Lethbridge	Completed
Turin Reservoir Development	Lethbridge	
Hartell Reservoir Improvement	Calgary	
Shuster Lake Improvement	Red Deer	
Floatingstone Creek Barrier	St. Paul	
Beaver Creek Reservoir Development	Red Deer	
Jack Bird Fish Pond	Peace River	
Wainwright Town Pond Development	Red Deer	
Pierre Grey Lake Fish Barrier	Edson	Completed
McVinnie Property Reservoir Development	Lethbridge	
Mitchell Lake Improvement	Red Deer	

The types of projects undertaken in the first year of the program were mainly reservoir improvement types in which low water levels were being improved to provide better over-winter survival of fish. Lehto Reservoir and Little Beaverdam Lake were projects of this type and both were completed.

Other types of projects include the building of fish barriers (e.g. Pierre Grey Lakes), development of new reservoirs, development of dugout ponds, building reservoirs to regulate water flows in streams and stream improvement projects such as Stauffer Creek.

FISHERIES RESEARCH

The principal project undertaken during the year by the Research Section was to derive a formula for the stocking of trout in the province's many small lakes and reservoirs in order to provide optimum return to the angling public. It is felt that existing stocking rates might be improved through detailed investigations on returns from various stocking rates and various sizes of trout used. Research was also initiated to establish homing, self-sustaining rainbow trout populations in several reservoirs.

HUNTER TRAINING

TABLE 1
CONSERVATION EDUCATION

Increased public concern in conservation and outdoor recreation is reflected in the general increase in demand and courses conducted.

Agencies Conducting Courses

Total number of Junior High Schools participating	165
Total number of Senior High Schools participating	44

Other institutions and organizations participating in the Hunter Training Program:

Alberta Fish and Game
Olds College
Vermilion College
University of Alberta
Boy Scouts
Armed Forces
Westfield Center

Successful Students April 1st, 1973, to March 31st, 1974	9,042

In addition to the standard classroom course a number of the above students attended the two Hunter Training Outdoor Camps:

Narrow Lake	2,052
Alford Creek (Caroline)	1,722
Total Hunter Training students graduated 1964 up to and including March 31st, 1974	35,386

TABLE 2
HUNTER TRAINING INSTRUCTORS

26 Instructor Courses were held with a total of 616 instructors qualified. Instructor qualifying courses were held in the following areas:

Courses	Qualified Instructors	Courses	Qualified Instructors
Altario	11	High Prairie	15
Beaverlodge	20	Hinton	46
Calgary	173	Lacombe	5
Camrose	22	Leduc	9
Carstairs	2	Medicine Hat	12
Drumheller	9	Okotoks	7
Edmonton	158	Olds	18
Evansburg	10	Red Deer	6
Falun	16	Rimbey	17
Fort Chipewyan	2	Slave Lake	13
Fort McMurray	12	St. Paul	4
Fox Creek	8	Tilley	1
Grande Cache	8	Vermilion	21

ENFORCEMENT—FIELD SERVICES

During the 1973-74 fiscal year the law enforcement-field services section responded to a rise in demand for services in a number of areas. In a program begun in the previous year, plans for the development of Regional Problem Wildlife Specialists were finalized. A wolf depredation special project was carried out in the Peace River area, while in the latter portion of the fiscal year the Department of Agriculture introduced a program to provide compensation for predatory animal losses. Fish and Wildlife officers were one of the groups assigned responsibility of conducting investigations into predatory animal loss claims.

In response to requests for increased participation in the apprehension of violators by concerned sportsmen, the Fish and Wildlife Division developed a public relations program which was named Outdoor Observer. The program was designed to assist the concerned sportsman in becoming more active in protecting the good sportsmen's interests in hunting and fishing. Outdoor Observer was designed basically to incorporate four areas of influence. These are:

(1) Prevention of infractions by increased knowledge,

(2) Prevention of infractions through example,

(3) Reporting after-the-fact infractions, and

(4) Reporting of infractions which have been observed.

It is expected the program will increase the level of public contact with the local Fish and Wildlife officers and will be functional for the 1974 hunting season.

The number of infractions again rose in the 1973-74 fiscal year. This is the sixth consecutive year prosecutions by the Fish and Wildlife Division has shown a rise. Including all violations 2,039 charges were processed. The rise represents a 7.03 percentage increase from the previous year.

The use of aircraft for enforcement purposes was increased during the current work year. Continued monitoring of night hunting appears to have reduced the frequency of the use of lights in taking big game. It is felt the publicity received about this activity generated more public cooperation to report known violations and to aid in identifying individuals involved. During the winter the use of helicopters for sport fishing patrols on lakes was initiated. Reports from field personnel on this type of enforcement patrol are favorable.

Two regions showed declines in violations processed. The decrease in violations processed at Lethbridge and Edson reflects partly the close of the pheasant season in the south and adjustments to the Zone One boundary in the Whitecourt area. It is interesting to note the impact which results from a change in management of an area.

In excess of 1,300 warnings were issued by Fish and Wildlife officers. Most related to licence irregularities, the use of marginal gear in fisheries and minor dress violations. It is felt the program to issue written warnings in lieu of verbal admonitions is a useful enforcement tool. In addition to enlightening and educating the public, the warning aids in identifying specific problem areas.

During the 1973-74 fiscal year, a record of age, occupation and residence was maintained. The information will be used in an attempt to identify specific problem areas. It is hoped programs can be designed to reduce violation levels in identifiable areas of concern.

TABLE 1

PROSECUTIONS

	1970-71	1971-72	1972-73	1973-74
Investigations	4,226	4,455	4,565	4,600
Prosecutions	1,620	1,804	1,905	2,039
Convictions (Figures include 59 dismissals, 75 Withdrawals)	1,517	1,654	1,789	1,905

TABLE 2

COMMON VIOLATION STRUCTURE

HUNTING INFRACTIONS	1972-73	1973-74
Illegal possession of game	198 - 20.1%	187 - 19.0%
Loaded Firearm in motor vehicle	151 - 15.3%	163 - 16.5%
Unlawfully hunting in closed season-area	90 - 9.1%	122 - 12.3%
Unlawfully hunting without authority	86 - 8.4%	111 - 11.2%

FISH INFRACTIONS	1972-73	1973-74
Unlawfully angling without authority	440 - 50.7%	574 - 61.1%
More than one rod and line	115 - 13.2%	78 - 8.3%
Angling in closed stream	64 - 7.3%	67 - 7.1%

TABLE 3

REGIONAL SUMMARY OF PROSECUTIONS

	Wildlife	Fisheries	Others	Total	Investigations*	Warnings	Complaints Processed
Region 1 Lethbridge	102	75	7	184	288	128	584
Region 2 Calgary	145	193	18	356	568	339	1,178
Region 3 Red Deer	113	93	10	216	323	148	1,761
Region 4 Edson	150	207	19	376	240	231	1,043
Region 5 St. Paul	188	270	51	509	576	362	1,674
Region 6 Peace River	213	91	4	308	517	142	1,188
Headquarters (Edmonton)	37	10	7	54	59	17	320
R.C.M. Police	36			36			
	984	939	116	2,039	2,571	1,367	7,748

Investigations cover incidents where an investigation was conducted but no court action resulted.

Figure 1

PROVINCIAL PROSECUTIONS 1963-1974

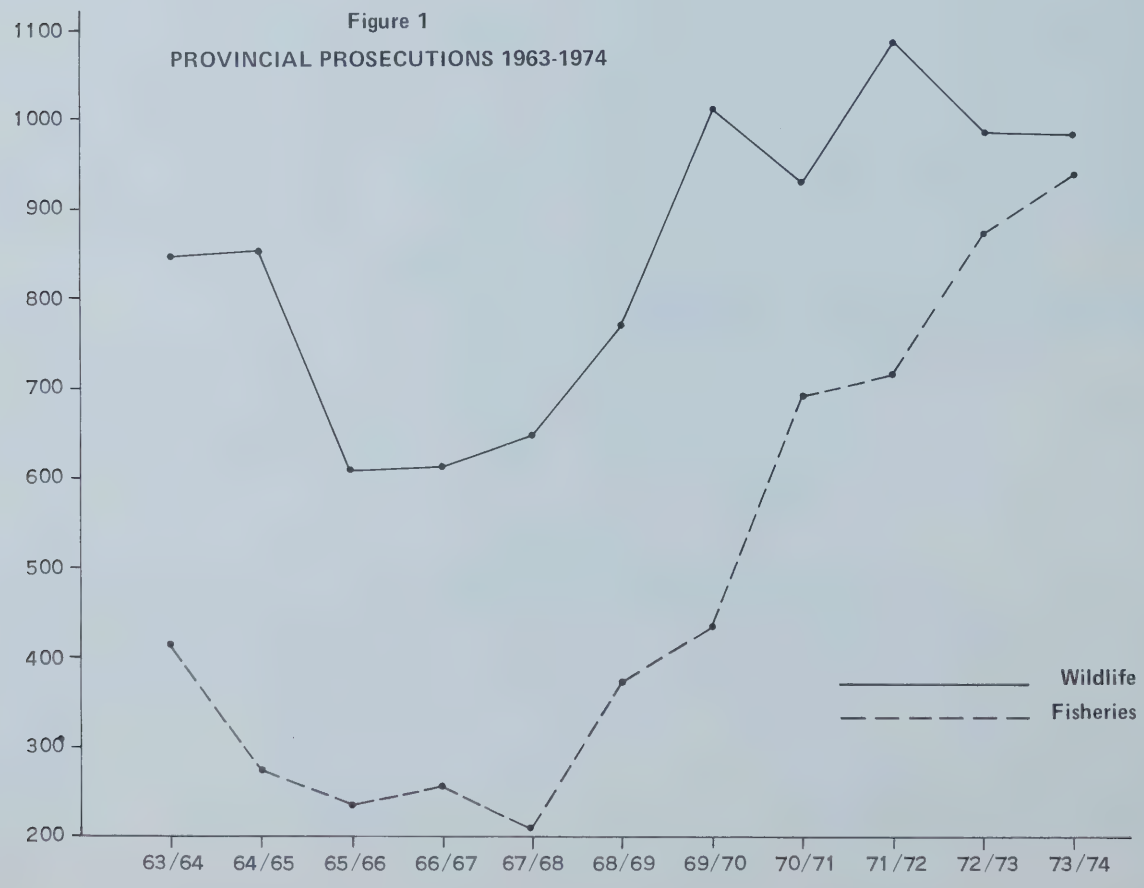


Figure 2

TEN–YEAR PROSECUTION TREND

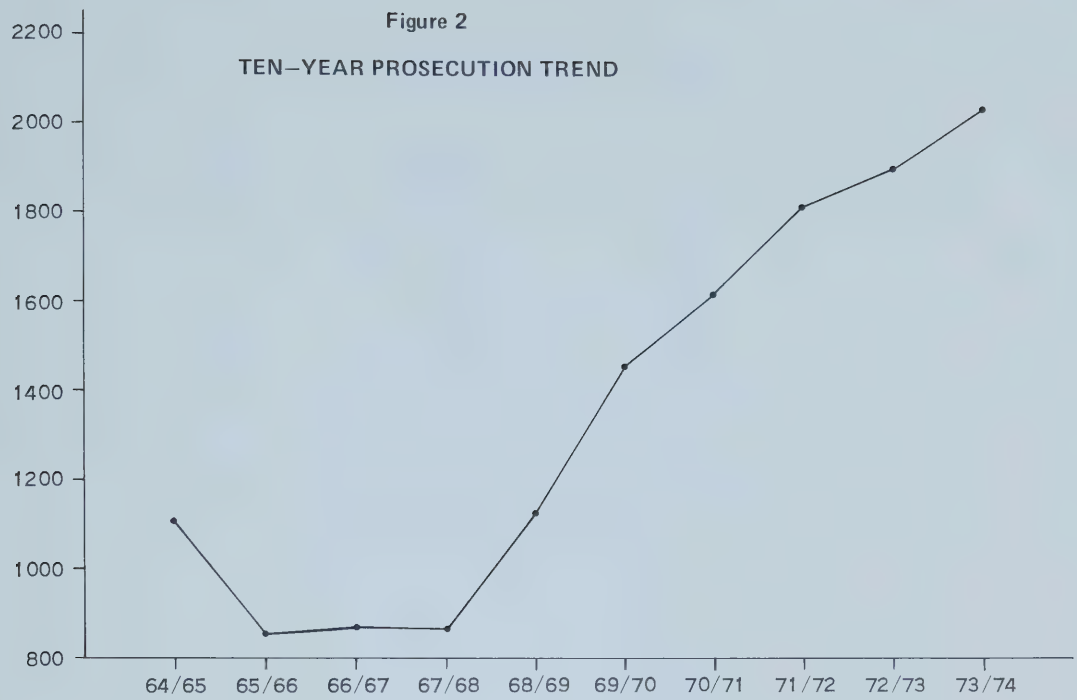


TABLE 4

INFRACTION PERCENTAGE BREAKDOWN BY OCCUPATION GROUPS

	Fisheries	Wildlife
Tradesman	26.31	22.80
Labourer	18.37	25.74
Businessman	17.89	12.97
Housewife	8.94	.78
Student	7.39	7.60
Farmer	6.44	14.67
Technical	5.25	4.84
Professional	3.81	7.60
Unemployed	2.86	1.83
Retired	2.74	1.17
	100.00%	100.00%

TABLE 5

RESIDENTIAL BREAKDOWN OF VIOLATORS OF THE FISHERIES AND WILDLIFE ACTS

	Fisheries	Wildlife
Non Resident	2.66	2.69
Urban	64.17	43.87
Rural	33.17	53.44
	100.00%	100.00%

TABLE 6

AGE GROUPING COMPARISON OF FISHERIES AND WILDLIFE VIOLATORS

Age Grouping	Fisheries Act	Wildlife Act
16 - 20	14.50	16.26
21 - 25	18.80	20.83
26 - 30	14.74	16.94
31 - 35	10.73	10.29
36 - 40	9.43	13.54
41 - 45	8.84	8.21
46 - 50	6.95	4.17
51 - 55	4.95	4.30
56 - 60	4.59	3.25
61 - 65	4.36	1.43
66 - 70	1.06	.26
71 - 75	.94	.26
76 - 80	.11	.26
	100.00%	100.00%

TABLE 7
AGE GROUPING COMPARISON
OF MOST COMMON VIOLATIONS

Age Grouping	Unlawful Possession (Wildlife Act)	No Licence (Wildlife Act)	Closed Season (Wildlife Act)	Loaded Firearm (Wildlife Act)	No Licence (Fishery Regs)
16 - 20	9.78	17.72	9.19	17.27	22.09
21 - 25	21.05	24.09	22.99	21.39	23.99
26 - 30	21.05	17.72	21.89	18.62	11.27
31 - 35	10.52	7.59	18.39	11.03	11.42
36 - 40	12.03	13.92	10.34	12.41	8.61
41 - 45	8.28	7.59	8.04	6.20	7.11
46 - 50	3.00	2.53	2.29	4.13	6.36
51 - 55	8.28	2.53	—	4.13	2.43
56 - 60	5.26	1.26	4.59	4.82	3.74
61 - 65	—	2.53	—	—	2.62
66 - 70	—	1.26	—	—	:18
71 - 75	.75	—	1.14	—	.18
76 - 80	—	1.26	1.14	—	—
	100.00%	100.00%	100.00%	100.00%	100.00%

PROBLEM WILDLIFE CONTROL

The Fish and Wildlife Division's involvement in problem wildlife control increased considerably during the past fiscal year. Greater demands by the general public as well as increases in populations of certain species of wildlife has forced the division to become more involved. Trained staff have been employed on special programs where it is necessary to capture specific animals or utilize more humane capture equipment. A Fur and Problem Wildlife Co-ordinator's position was created to assist in training personnel and co-ordinate fur and problem wildlife programs throughout the province. Research work is being continued in many locations related to various wildlife species in an attempt to reduce or eliminate damage by using devices which restrict the activities of the wildlife involved.

The following information indicates the numbers of complaints responded to and the numbers of the various species of wildlife removed. Wherever possible and practical, the wildlife was live captured and trans-located.

TABLE 8
FUR–BEARING ANIMAL AND FUR–BEARING CARNIVORE COMPLAINTS

ANIMALS	Number Complaints	Number Removed
Beaver	1,308	1,600
Muskrat	245	18,594
Wolves	135	99
Coyotes	63	95
Lynx	12	3
Skunks	11	75
OTHERS		
Bear	552	240
Cougar	5	1

BIRDS	Number Complaints	Number Removed
Waterfowl*	685	9,441
Birds of Prey	13	7
Others	11	9
UNGULATES	405	—

In addition to the wildlife complaints investigated and wildlife removed, division staff removed 982 beaver dams which were causing flooding conditions. Meetings attended by the Enforcement Field Services section related to problem wildlife control - 40.

*Waterfowl crop depredation complaints and birds taken under duck damage permits.

TABLE 9

Monthly distribution of beekeeper complaints, number of hives damaged and number of bears removed in Falher area, 1972-73.

Month	Complaints Received		Hives Damaged		Bears Removed	
	1972	1973	1972	1973	1972	1973
May		32		118		8
June	40	36	142	114	11	13
July	44	39	157	73	20	25
August	20	50	23	163	14	37
September	2	—	5	—	3	—
TOTAL	106	157	327	468	48	83